

Michigan's Electronic Discharge Monitoring Reports (e-DMRs)

A Need for the Network

Facilities in the U.S. that discharge wastewater are required to submit Discharge Monitoring Reports (DMRs) to their state regulatory agencies. These DMRs summarize the quantity and quality of the wastewater and allow regulators to track a facility's compliance with its discharge permits. Monthly submissions make DMRs one of the nation's largest reporting requirements, second only to tax reporting.

Like many states, Michigan had to collect DMR data from facilities by mail, manually input the data into its own data systems, and then enter that same data into the United States Environmental Protection Agency (U.S. EPA) Permit Compliance System to meet its reporting requirements. The Michigan Department of Environmental Quality (DEQ) identified several problems and inefficiencies in its paper-based DMR submission process.

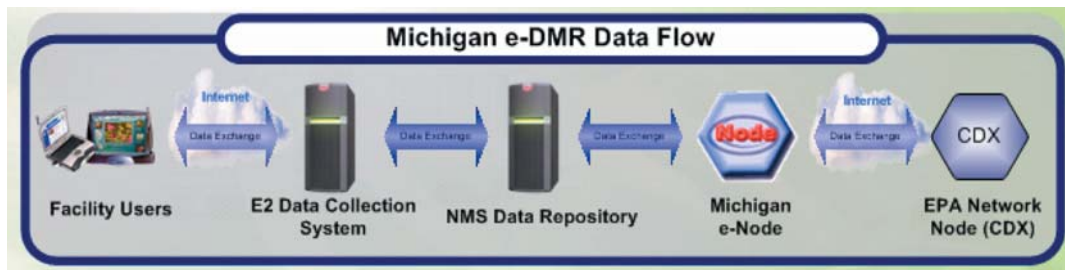
- Paper DMRs required manual data entry that was labor intensive and costly.
- Daily wastewater reports had accrued a three-year backlog.
- Duplicative data entry into separate State and Federal systems was time consuming and subject to keying errors.
- Decision makers did not have access to timely or accurate wastewater discharge data.

With increasingly scarce resources and a high demand for quality data, the Michigan DEQ needed a better way of doing business.

An Exchange Network Solution

Michigan found its answer by combining an innovative e-government solution with the Exchange Network. In the spring of 2003, the Michigan DEQ launched an electronic data collection system called E2. This system allows regulated facilities to upload their e-DMRs through the state's web site. Users can manually enter data on a web entry form, copy and paste their data from an existing spreadsheet, or upload an eXtensible Markup Language (XML) file to the E2 secure electronic reporting database.

Data from E2 is captured and sent via XML to the Michigan National Pollutant Discharge Elimination System (NPDES) Management System (NMS). Using XML and web services, Michigan can automatically send its DMR data from NMS to EPA's Permit Compliance System, thereby fulfilling its reporting requirements.



Seeing Results

Today, Michigan is recognized by the U.S. EPA and by other states as having one of the most advanced and efficient electronic wastewater reporting systems in the country. The system is already saving money for the state and regulated facilities and providing managers and analysts with the high quality data they need to make sound decisions for our environment.

Select Monitoring Point: 001A Save Current Page

PERMITTEE NAME: Motor Wheel Disposal Site PERMIT NUMBER: M0055877 DISTRICT: Lansing
MAILING ADDRESS: 1250 North High Street MONITORING POINT: 001A COUNTY: Ingham
Lansing, MI 48912
FACILITY: Motor Wheel Disposal Site
LOCATION: 1250 North High Street MONITORING PERIOD: 2003.12.01 To 2003.12.31
Lansing, MI 48912
NO DISCHARGE FROM SITE:

PARAMETER	QUANTITY OR LOADING	UNITS	QUALITY OR CONCENTRATION	UNITS	NO. EX.	FREQUENCY OF ANALYSIS
Flow	Sample Measurement: 105	130			0	Daily
PARM Code: 50050 Mon. Site No: 001A Stage: 1	Permit Requirement: Maximum Monthly Average	(report) Maximum Daily				Daily
Total Suspended Solids	Sample Measurement: ****	****	8	26	0	Weekly
PARM Code: 00530 Mon. Site No: 001A Stage: 1	Permit Requirement: ****	****	Maximum Monthly Average	(report) Maximum Daily		Weekly
Total Dissolved Solids	Sample Measurement: ****	****	1040	1110	0	Weekly
PARM Code: 70295 Mon. Site No: 001A	Permit Requirement: ****	****	(report) Maximum Daily	(report) Maximum Daily		Weekly

A screen shot from Michigan's E2 system showing a completed e-DMR.

After the first 22 months, more than 40% of Michigan facilities were reporting electronically and this data was automatically sent to the U.S. EPA via the Exchange Network. Michigan projects that it is saving between \$250,000 and \$500,000 annually as a result of the e-DMR project. Members of the state's regulatory staff no longer need to manually enter data into multiple information systems. This has dramatically reduced labor costs and eliminated the need to correct inconsistencies stemming from data entry errors.

Regulated facilities are also enjoying a cost savings as a result of the project. Michigan estimates the annual savings for wastewater facilities that use electronic reporting at \$2,000 per facility, or \$2.5 million statewide. With all of these new efficiencies, Michigan anticipates a full return on its investment in just three to four years with full facility participation.

As electronic reporting and XML technology have replaced other outmoded methods for exchanging data, the level of access to high quality data has improved dramatically. Michigan eliminated its three-year DMR backlog in the first 18 months of the e-DMR project. Information that once took months to reach analysts is now available in nearly real time. Using the infrastructure of the Exchange Network also ensures that the data are not only more accessible but of a higher quality. Data are entered once and then transferred automatically and consistently from system to system. Better data helps Michigan and the U.S. EPA make better decisions to protect our environment.

Learn More

To learn more about Michigan's e-DMR effort, contact:

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